

EXHIBIT C

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1 P R O C E E D I N G S

2 THE VIDEOGRAPHER: Good morning. We are
3 going on the record at 9:02 a.m. Today is November
4 27, 2024.

5 Please note that audio and video recording
6 will continue to until all parties agree to go off the
7 record.

8 Your microphones are sensitive and may pick
9 up whispering and private conversations. I would ask
10 that why please mute your phones at this time.

11 This is media unit No. 1 in the
12 video-recorded deposition of Brian Strandjord, PC, CFI
13 taken by counsel for the plaintiff, in the matter of
14 Stephanie Wadsworth, et al., versus Walmart, Inc., and
15 Jetson Electric Bikes, LLC, filed in the United States
16 District Court, in and for the District of Wyoming;
17 Case No. 223 CV 00118 N D F.

18 The location of this deposition is 1660
19 Lincoln Street, Suite 2250 in Denver, Colorado.

20 My name is Julie Butcher. I'm representing
21 Veritext, and I'm the videographer. Our court
22 reporter is Kim Smith from the firm Veritext.

23 Counsel, will you please introduce yourself
24 for the record, beginning with the noticing attorney.

25 MR. MORGAN: Mike Morgan for the
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1 plaintiffs.

2 MR. LaFLAMME: Eugene LaFlamme for
3 defendants Walmart and Jetson.

4 THE VIDEOGRAPHER: Will the court reporter
5 please swear in the witness.

6 BRIAN N. STRANDJORD, PE, CFI, CFEI
7 having been first duly sworn, was examined and
8 testified as follows:

9 EXAMINATION

10 BY MR. MORGAN:

11 Q Good morning. Could you please state your
12 name for the record.

13 A Good morning. My name is Brian Strandjord.

14 Q Strandjord is the pronunciation?

15 A Correct.

16 Q Okay. And, Mr. Strandjord, you're here in
17 relation to some work you did at the Wadsworth house
18 in Green River, Wyoming; is that correct?

19 A Yes.

20 Q And specifically looking at your report,

21 which I would like to attach as plaintiff's Exhibit A,
22 when I -- when I go to the purpose of your inspection,
23 it was -- is it a fair characterization that your
24 purpose was to evaluate the impact of the fire on the
25 electrical system on the Wadsworth home?

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1 A My purpose was to evaluate the electrical
2 system for what is it might tell us about the fire
3 that occurred.

4 Q Okay. Specifically, what do you mean when
5 you say tell us about the fire? Because when I look
6 at the -- when I look at the introduction, which is on
7 page 4 of 26 of your report, it says, AEI Corporation
8 was retained by McCoy Leavitt Laskey, LLC, to examine
9 the electrical system at the residence as it related
10 to the fire.

11 Will you explain how that statement tells
12 us according to what you just told me.

13 A Sure. So when we have a fire in a
14 structure and we have an electrical system in the
15 structure, branch circuit wiring throughout the
16 structure, the fire -- when the fire attacks that
17 electrical system, we will see evidence of arcing in
18 locations where the conductors your energized when the
19 fire attacked them.

20 Q Okay. Is it fair to say that the primary
21 focus of your responsibilities in the Wadsworth matter
22 was to evaluate the arcing patterns within the
23 Wadsworth home?

24 A That is correct.

25 Q And in those findings, to the best of your

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1 understanding, were then passed on to Mr. Filas?

2 A Yes. They were passed on to Mr. Filas.

3 Q Filas.

4 But you all don't work in the same company;
5 do you?

6 A We do not.

7 Q But so when you talk about it how it
8 relates to the fire, you're finding specifically about
9 arch mapping, right?

10 A Correct.

11 Q Is it fair to say that your finding in your
12 report are confined to the arch mapping?

13 A Yes.

14 Q And so today, we can focus our
15 conversations on that. Is that okay?

16 A That's okay with me.

17 Q All right. If we could put as plaintiff's

18 Exhibit B on the screen, which will be the CV for
19 Mr. Strandjord?

20 MR. CURRAN: Yes, sir. One moment.

21 It's coming up now.

22 MR. MORGAN: Okay.

23 Q (By Mr. Morgan) Okay. Mr. Strandjord, I'm
24 now showing you what has been marked as Plaintiffs'
25 Exhibit B, which was produced in relation to this

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1 deposition as your current CV.

2 Can you verify that this is up-to-date and
3 current as of today?

4 A Are there multiple pages to this CV.

5 Q Yes, sir. We'll just scroll down. I just
6 want to make sure you have a chance to see it.

7 A No, that's not a current CV of mine. My
8 current CV is attached to my report that was produced
9 in this matter.

10 Q Okay. Going back to the report. Going to
11 page 27 of the report but on the PDF. Pull that up.

12 MR. CURRAN: Yes, sir. 27?

13 MR. MORGAN: The PDF, yes.

14 MR. CURRAN: Yes, sir.

15 MR. MORGAN: There's 26 pages on the report
16 and then page 27 of the CV.

17 MR. CURRAN: Yes, sir. Okay. One moment.

18 Q (By Mr. Morgan) Okay. Page 1 --

19 MR. LaFLAMME: Is this part of Exhibit A
20 already?

21 MR. MORGAN: Yes, sir.

22 MR. CURRAN: Okay. Thanks.

23 MR. MORGAN: Yes, this is what we received
24 as Exhibit A.

25 Q (By Mr. Morgan) So -- and is the testimony
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1 record included as part of your CV, Mr. Strandjord?

2 A The testimony record is -- I would not
3 consider part of my CV. It's a separate document,
4 being my testimony record.

5 Q Okay. So your CV has been reduced to one
6 page at this point; is that correct?

7 A That's correct.

8 Q Will you give us the -- on this page, will
9 you point to the specific training that you believe is
10 relevant or education that you believe is relevant to
11 your training to perform arc mapping.

12 A Certainly. In addition to my bachelor of
13 science degree in mechanical engineering, my licensing
14 is both a mechanical engineer and an electrical

15 engineer in multiple states.

16 And my work history, which over the last
17 approximately ten years, has almost exclusively
18 involved the investigation of fires and explosions and
19 the examination of electrical systems.

20 Q Where there are electrical systems present,
21 obviously, correct?

22 A Correct.

23 Q I see that you look at other explosion
24 types, such as lithium ion batteries or things of that
25 nature.

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1 Would there still be arcing in those type
2 of issues?

3 A There certainly could be.

4 Q I guess depending on the location of where
5 the fire takes place?

6 A Yes.

7 Q Okay. When -- tell me about how your
8 training as a mechanical engineer prepared you for arc
9 mapping. What is the relevant educational background
10 there?

11 A Certainly. In the field of mechanical
12 engineering, and specifically in my education, there
13 was a great deal of heat transfer, thermodynamics and

14 materials science that all play into how a fire would
15 affect materials, specifically electrical conductors.

16 Q Where was that training at?

17 A That was at the University of Colorado.

18 Q They have special classes at the University
19 of Colorado that teach about how fire will interact
20 with specific electrical conductors?

21 A They have -- they have classes which I --
22 when I took at part of my education involving heat
23 transfer and thermodynamics and material science,
24 which are all applicable to that.

25 Q But no specific training on how fire

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1 interacts with electrical conductors at the University
2 of Colorado; is that fair?

3 A Not at the university.

4 Q Okay. Where did you obtain that specific
5 training?

6 A That specific training was through my
7 employment over approximately the last ten years, in
8 forensics.

9 Q When you say forensics, can you explain
10 what that means?

11 A Sure. That would be investigating

12 different failures, fire, explosions, accidents, and
13 explaining that using science and engineering to help
14 explain what happened to my clients.

15 Q Okay. And when we say the last ten years,
16 are we starting that forensic work and this training
17 in 2014?

18 A Correct.

19 Q And again, I don't mean to say that there's
20 not --

21 MR. MORGAN: We can take this down.

22 Q (By Mr. Morgan) I'm not meaning to say
23 that there's not applicable science and that
24 translates between what you're doing here and
25 otherwise.

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1 But specifically for arc mapping and the
2 forensic, that would have started when you worked at
3 Rimkus?

4 A Correct.

5 Q And when you worked at Rimkus, did you work
6 with Mr. Filas?

7 A I did work with Mr. Filas.

8 Q I apologize for saying his name wrong. How
9 long did you work with Mr. Filas?

10 A Approximately five years.

11 Q Is Mr. Filas the one who specifically
12 trained you in arc mapping?

13 A I certainly received some training from Mr.
14 Filas. I also worked with other engineers at Rimkus.
15 I learned -- I also -- I also learned aspects of arc
16 mapping from both International Association of Arson
17 Investigators Training and National Association of
18 Fire Investigators training class.

19 Q Okay. How many of those training classes
20 did you go to with the IAAI or NAFI?

21 A I've been to several week-long classes and
22 seminars with -- with both organizations. And then a
23 great number of hours of online training.

24 Q Okay. Is your online training represented
25 in this CV?

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1 A I don't believe it is specifically
2 represented there.

3 Q Okay. Do you know approximately how many
4 hours you spent online learning about arc mapping?

5 A Specifically about arc map, I couldn't say.

6 Q Okay. Is there any specific classes that
7 you took that you would have obtained a certificate
8 regarding arc mapping?

9 A Yes. I obtained certificates for all of
10 the online courses.

11 Q Okay. And do you have those in your
12 possession somewhere?

13 A I do not have them with me today.

14 Q No. I understand. But those are things
15 that you could retrieve if we asked you for online
16 certifications regarding arc mapping, that's something
17 you would be able to find?

18 A Yes.

19 Q Okay. As far as the IAAI arc mapping work,
20 did you receive a certificate for that class?

21 A Yes. I have certificates for all of the
22 fire investigative training courses, both in person
23 and online, that I've attended.

24 Q So when you went to these fire
25 investigative courses, did you -- were they in total

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1 fire investigation or were they specific to arc
2 mapping?

3 A Most of them would be total fire
4 investigation.

5 Q Could you give us the history of arc
6 mapping, please. When was it created and how it's
7 advanced from its creation to today.

8 A I couldn't tell you the history of the
9 subject.

10 Q Okay. And looking at Plaintiffs' Exhibit
11 A, I don't see any references to any peer reviewed
12 studies regarding arc mapping.

13 Are there some that you have not provided
14 to us?

15 A No. I do not have any publications.

16 Q I'm not asking about your publications.
17 I'm saying, do you have any publications that support
18 the tool of arc mapping and fire investigation?

19 A Included in my report, under reviewed
20 items, there is both NFPA 921 and there is technical
21 bulletin No. 1 from the ATF fire research laboratory.

22 Q Okay. Would that conclude what you
23 considered to be peer reviewed publications regarding
24 arc mapping?

25 A Yes, it would.

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1 Q Is there a reason that you used NFPA 221
2 version in the references that you cited?

3 A Yes. While there's a more recent
4 publications, 2024, which has some minor additions,
5 explanatory material, the science has not changed.

6 And I certainly could not state that I
7 followed the 2024 edition when I conducted the site
8 inspection because that edition had not been published
9 yet.

10 Q But you did write your report when that
11 edition had been published, correct?

12 A I did.

13 Q And you realized that specifically in
14 relation to arc mapping, there has been some changes
15 within the NFPA's 921 guidance on arc mapping; true?

16 A There was some guidance that changed in the
17 2021 edition compared to previous editions. In the
18 2024 edition, the guidance retained the same, the
19 science remains the same.

20 They have simply added more explanatory
21 material, example photographs to help explain that to
22 people.

23 Q So your position is that if the NFPA says
24 otherwise, you do not believe that their guidance has
25 changed on the use of arc mapping and fire

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1 investigation?

2 A Not related to how I've -- not related to
3 how I have used arc mapping in this instance.

4 Q Okay. Can you tell me about the lit air

5 review that you did in preparation for validating that
6 arc mapping is a valid tool or method of determining
7 fire origin?

8 A I'm sorry. I don't quite understand the
9 question.

10 Q Okay. Did you do -- did you search any
11 publication today find out the scientific
12 acceptability of arc mapping in preparation for your
13 deposition or performing your report?

14 A I did not do any searches specific for this
15 deposition.

16 Q Okay. Tell me about the searches that you
17 did in preparation of performing the investigation of
18 arc mapping. In this case, what type of literary
19 review, if any, did you do?

20 A I did not do any literary review
21 specifically for this case. As I have been doing this
22 as a profession for many years, I was already familiar
23 with the subject.

24 Q Okay. And as doing this for many years,
25 you understand the requirements in federal court as

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1 far as what you're report must include, correct?

2 A Correct.

3 Q And you understand that any -- that in
4 order to be accepted, one of the categories, not the
5 only one, but one the thing we look at is peer
6 reviewed literature on the subject that you plan to
7 testify; is that fair?

8 MR. LaFLAMME: Object to the form, to the
9 extent is it calls for a legal conclusion.

10 Go ahead.

11 Q (By Mr. Morgan) Sure.

12 A Could you restate the question, please.

13 Q Sure. You work in a science-based
14 industry, where you testify as an expert for a living,
15 correct?

16 A Correct.

17 Q And you understand in science and
18 specifically in the court evaluating science, one of
19 the things that is looked to is peer reviewed
20 literature supporting methodology or a finding of
21 scientific fact; is that fair?

22 A Yes.

23 Q Okay. Are you familiar with the recent
24 peer reviewed publications dating back to 2016 through
25 2024 that take a negative view of arc mapping?

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1 A I'm aware that there's some articles out

2 there.

3 Q Was there some reason that those articles
4 were not included in your report?

5 A I did not find those articles to be
6 applicable to my report.

7 Q Okay. And we're going to go through those
8 no detail.

9 Would you walk me through the hypothesis
10 that you made regarding the Wadsworth case before
11 starting your investigation.

12 A Prior to starting my investigation, I did
13 not have a hypothesis.

14 Q Okay. Did you develop one at any time?

15 A Yes, I did.

16 Q All right. Then walk me through your
17 methodology that was utilized in this case from
18 receiving the report to receiving the assignment to
19 creating your report.

20 A Certainly. After receiving the assignment,
21 doing some background research, what was available
22 from public entities, social media, newspaper reports,
23 things of that nature, participated in several site
24 investigations, where we collected data, then analyzed
25 that data and developed several hypotheses, one of

1 which was that the fire had started inside of the
2 residence, specifically inside of Bedroom 4; and the
3 other hypothesis was that the fire had started outside
4 of the residence.

5 And then using -- using the data that we
6 had collected, analyzed and evaluated those hypotheses
7 to determine if any of them could be eliminated.

8 Q Okay. Let's go back to -- at which phase
9 of this process did the arc mapping take place?

10 A The arc mapping was conducted both at the
11 scene, during the site inspection, and at the
12 laboratory examination that followed.

13 Q Take me through the entirety of your
14 process of arc mapping in this case.

15 A Certainly. The first thing -- the first
16 thing that we did was we surveyed and evaluated the
17 entire electrical system, we documented what was
18 present, which circuits were involved, what exception
19 cord wither plugged in other thing, then we collected
20 those items, documenting where they were.

21 And then at the laboratory, we went through
22 in more detail and examined those conductors for any
23 evidence ever electrical arcing.

24 Q Take me through the process of surveying

25 and evaluating the electrical initial units present at
18

1 the seen?

2 A Sure. So that involved looking through the
3 scene, tracing circuits, determining what circuits
4 were present, which locations, and documenting that.

5 Q What does it mean to trace a circuit?

6 A That can be done either electrically or in
7 this case, physically, following the conductors back
8 to where they're connected to determine where the
9 conductors run and what is powering them.

10 Q Okay. You did that manually in this case?

11 A Yes. I did that in conjunction with other
12 investigators at the site, all working together.

13 Q But you personally did the arc mapping in
14 this case correct?

15 A I personally did arc mapping, yes.

16 Q Okay. Tell me about how you manually
17 traced the currents in this house.

18 A I'm sorry. We did not trace any currents
19 in the house.

20 Q Okay. How did -- how did you trace the
21 circuits? I apologize.

22 A The circuitries in this case were traced
23 physically. We simply followed the extension cords

24 outside to where they were plugged in. We followed
25 the conductors in the walls, back to where they
19

1 connected to the main circuit panel.

2 Q Was there any touching of these wires
3 during that process?

4 A Yes.

5 Q I want to be very clear: I'm asking for
6 everything that you did to manually trace the entire
7 process; because, as you know, there's a very specific
8 process, right, for arc mapping --

9 A Right.

10 Q -- that's accepted?

11 I understand the basic premise, and I want
12 to be clear on my question. I understand the basic
13 premise that you traced it back.

14 What I'm asking is: What did you actually
15 do step by step in this process to arc map this home,
16 each -- each circuit you are phrased, each material
17 you used, how you decided where there was an arc,
18 every single thing.

19 So my question is: Would you please walk
20 me through in detail every element of arc mapping that
21 you performed at this home.

22 A Sure. As I stated, we physically -- we
23 physically traced out the conductors to determine
24 exactly where everything was. We documented that,
25 then collected those conductors.

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1 We collected -- in this case, we were able
2 to collect them -- the entire circuit, branch circuit
3 that went to Bedroom 4 in its entirety without cutting
4 or severing any of the conductors by cutting out
5 sections of the wall that still remained; then
6 collected the extension cords and other conductors
7 that were outside of the residence that were plugged
8 into a receptacle on the residence, collected all of
9 those. Those were preserved.

10 And at the laboratory, we went through
11 every inch of the fire damaged conductors, both
12 visually and tactically, with fingers, myself and
13 other investigators that were participating, to look
14 and feel for evidence of electrical arcing.

15 Q Okay. I wanted to break that down. So
16 when you say that you physically traced, you went to
17 the circuit breaker, correct?

18 A Correct.

19 Q And where was the circuit breaker in this
20 home?

21 A The main circuit panel was located in the
22 basement, below Bedroom 4.

23 Q Okay. As far as the extension cords and
24 the entire branch circuit for Bedroom 4, were those
25 all connected to that breaker panel in the basement?

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1 A Yes. Every -- the two circuits that were
2 collected, the circuit that served Bedroom 4 and the
3 circuit that served the outside receptacle, both of
4 those circuit breakers were located in that main
5 electrical panel.

6 Q Okay. And on the scene, in relation to the
7 branch circuit for Bedroom 4, you were able to remove
8 those, but you did not inspect them at the scene for
9 evidence of arcing, correct?

10 A Are you speaking about the breakers
11 themselves?

12 Q I mean the branch circuit, that you
13 removed.

14 A That is correct.

15 Q Also, is it fair to say that based off the
16 pictures that you took, that the -- there was minimal,
17 if any, fire damage within the basement area of the
18 Wadsworth home?

19 A That's correct.

20 Q You also recovered the extension cords that
21 were running to the shed outside of Bedroom 4,
22 correct?

23 A Yes, we did.

24 Q Did you retrieve any of the branch
25 circuitry into which those extension cords were
22

1 plugged into?

2 A We retrieved some of that. We traced out
3 those lines. We retrieved some of it. Some of it was
4 non-fire damage and very well encased in the wall.

5 Q Okay. Being encased in walls is important
6 in arcing, correct, arcing evaluations; is that fair?

7 A It can be.

8 Q Well, walls and insulation generally
9 provide some protection versus a stranded line,
10 correct?

11 A They can. In this case, the conductors I'm
12 referring to that fed the outdoor receptacle were in
13 an area just outside of where we had direct fire
14 damage.

15 Q Okay. As far as collection of other branch
16 circuits, other than the ones for Bedroom 4, was that
17 done?

18 A No. There were no other branch circuits
19 collected within the house.

20 Q Was Bedroom 4 the only room that had fire
21 damage within the home?

22 A It was not.

23 Q Is there a reason that the other branch
24 circuits were not collected?

25 A Yes: It was determined by the fire
23

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1 investigators at the scene that those other rooms were
2 outside of the area of origin as they determined it
3 for the fire and, therefore, we did not collect those
4 circuits.

5 Q Fair to say that that based off the fact
6 that those circuits were not collected for the
7 physical lab inspection, that you were unable to tell
8 us whether or not those circuits outside of Bedroom 4
9 were energized at the time the fire reached the room?

10 A You're speaking about the other individual
11 rooms in the house?

12 Q Correct. Yes, sir.

13 A I cannot speak to -- I cannot speak to what
14 condition those conductors are in. However, based on
15 the information that we did -- we did find during the

16 arc mapping, I believe to those circuits were all
17 de-energized by the time the fire got to them.

18 Q Okay. But you did not inspect those to be
19 able to give us an opinion here today that you believe
20 they were de-energized because of lack of arcing,
21 correct.

22 A Correct. I did not physically inspect
23 those other conductors.

24 Q And the same vein, you did not trace each
25 physical conductor back to the circuit breaker; is

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1 that fair?

2 A From the other parts of the house, that is
3 correct.

4 Q Okay. So when we talk about tracing the
5 circuit breaker, we are limiting that to Bedroom 4 and
6 the extension cords that were in the shed outside of
7 Bedroom 4; is that fair?

8 A Correct. We are limiting it to the area --
9 the potential areas of the origin identified by the
10 fire investigators.

11 Q Okay. When we go back to your training and
12 experience, education or work-wise, will you tell me
13 your background in metallurgy and where that has come
14 from.

15 A Those were -- that is from some basic
16 material science classes during my undergraduate
17 education.

18 Q Okay. And beyond that, there's no master's
19 or Ph.D. that has been left off or is in process right
20 now; is there?

21 A No.

22 Q Okay. Take me through the process of once
23 we get to the lab, how it was that you were able to --
24 let me strike that.

25 Take me through the process of when you got
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1 to the lab of what you did to look for the presence of
2 arcing.

3 A Sure. As I previously stated, we went --
4 went through every inch of the fire damage conductors,
5 both visually and tactically, by hand, to look for
6 evidence of arcing.

7 Q When we talk about the fire damage
8 conductors, is it fair to assume that every conductor
9 within Room 4 is included in that?

10 A When I speak about the fire damage
11 portions, I'm referring to the portions of the
12 circuits that have the insulation burned on them.

13 There were portions buried in the walls that had
14 intact installation.

15 Q So when we're talking about the entire
16 circuit, you did not take the entire branch circuit
17 from Bedroom 4; you only took the portions that you
18 deemed potentially worthy of further investigation; is
19 that fair?

20 A No, that is not correct. The entire branch
21 circuit was collected. However, the portions of the
22 conductors that still had intact wiring insulation
23 were not cut open and examined.

24 Q Why not?

25 A Because there was no evidence that there
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1 was a fire there.

2 Q In Bedroom 4, there was no evidence ever
3 fire in some of those walls?

4 A There was no evidence that there was fire
5 at the unburned electrical insulation on the
6 conductors.

7 Q Okay. Will you explain that to the Court,
8 please.

9 A Sure. The -- when we -- when we find
10 portions of the wire that have unburned insulation,
11 that is consistent with those portions of the wire not

12 being directly attacked by the fire.

13 Q Okay. And how is that determination made?

14 A The determination as to whether the wires
15 are burned or not?

16 Q Yeah. Whether they're burned to the level
17 that would be impacted by the fire.

18 A In many cases here -- or in some cases, I
19 should I say, when I say intact insulation, I mean
20 that the wire has not -- has not been burned. It
21 might be partially discolored, but it is intact.

22 Q Meaning it has its outside insulation cover
23 on it?

24 A Correct.

25 Q And when you talk about the loss of

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1 insulation, you're talking about seeing an actual
2 metal wire; is that fair?

3 A That's fair.

4 Q And so do you trace the -- did you trace
5 the wire in the point where you found intact
6 insulation on these -- in Bedroom 4, when you were
7 collecting the samples?

8 A We traced out the entire circuit, including
9 those portions.

10 Q But I'm saying were you -- but you
11 eventually decided to gather some, correct?

12 A We gathered the entire branch circuit for
13 Bedroom 4.

14 Q Okay. Did you have to cut wires that
15 were -- when it's still connected within the wall that
16 you didn't take, you had to cut it at some point,
17 right?

18 A No. We did not cut any of the wires. We
19 cut the wall around it to take the wires.

20 Q Okay. And so some -- every portion that --
21 every portion of the wire that you saw had damage to
22 its insulation was taken all the way back to -- to the
23 circuit breaker; is that right?

24 A The entire branch circuit that was within
25 Bedroom 4, whether the insulation was damaged or not,
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1 was taken intact. That was traced down to a junction
2 box in the basement, adjacent to the main electrical
3 panel.

4 That was an area where we had no fire
5 damage. And the decision was made to cut the
6 conductors there and collect them.

7 Q Okay. So that's where -- that's where it
8 ended, at least for our evaluation here, of what you

9 were able to examine?

10 A Yes.

11 Q Okay. So when you say we determined, who
12 is we?

13 A At the fire scene, there's always a -- when
14 there are multiple investigators from multiple parties
15 involved, we try to do everything to the extent we can
16 by consensus. So we would all agree on a location
17 where it would be good to cut the wires.

18 Q Do you agree that there are certain types
19 of fires that involve electrical conductors that are
20 not appropriate for arc mapping?

21 A Yes, there certainly can be.

22 Q What would those be?

23 A Well, one common example would be a vehicle
24 that is powered about a battery. That battery will
25 be -- until that battery is consumed by the fire,

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1 there will be electrical energy present.

2 And we can see arcing in many, many places
3 that have really nothing to do with the fire.

4 Q What about aluminum conductors?

5 A In the case -- in the case of aluminum
6 conductors, because aluminum has such a lower melting

7 point, it is often not possible to find arc sites on
8 an aluminum conductor.

9 Q Okay. What is the melting temperature of
10 copper?

11 A The melting temperature of copper,
12 reasonably pure copper, which is typically used for
13 electrical wiring, is approximately, if I recall
14 correctly, about 1,983 degrees Fahrenheit.

15 Q And what did -- the fire temperature in
16 Bedroom 4, what did that temperature reach?

17 A I do not any the answer that that.

18 Q Is that important to your analysis?

19 A I'll clarify that: I saw no evidence that
20 the fire reached the temperature equal or greater to
21 the melting temperature of copper. We did not see
22 evidence that the copper melted in Bedroom 4 from fire
23 attack.

24 Q Okay. Are you basing that evidence solely
25 on the fact that you do not believe the copper melted?

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▲

1 A That is correct.

2 Q Because you agree that if copper melts, it
3 can produce a false arcing result; true?

4 A If copper melts as the result of fire
5 attack, it -- it melts as it would during an

6 electrical arcing event; but it melts in a different
7 fashion, which is often visually apparent.

8 Q Is -- do you have any literature to support
9 that proposition?

10 A Yes, I do. Going back to my report, the
11 Department of Alcohol, Tobacco, and Firearms Fire
12 Research Laboratory Technical Bulletin No. 1.

13 Q Okay. And do you also agree that arcing is
14 not appropriate in fires with extensive and widespread
15 fire damage?

16 A That's a very -- that's a very --

17 MR. LaFLAMME: Object to form.

18 Go ahead. Sorry.

19 A I think that's a very vague question, that
20 I'm not sure I can answer.

21 Q (By Mr. Morgan) Okay. Could we please
22 pull up and mark as Exhibit -- well, hold on one
23 second. Yes, but I'm going to ask one more question
24 first.

25 Are you familiar with the National Academy
31

1 of Forensic Engineers?

2 A Yes, I am.

3 Q Are you a member of the National Academy of

4 Forensic Engineers?

5 A I am not.

6 Q Do you receive or subscribe to the journal
7 of the national Academy of forensic engineers?

8 A I do not.

9 Q Are you familiar with David J Icove, Ph.D.?

10 A I don't believe so.

11 Q How about Elizabeth Buc, Ph.D.?

12 A Yes, I have worked on cases where Elizabeth
13 Buc has been involved.

14 Q Okay. Mark Goodson?

15 A Yes, I know Mark Goodson.

16 Q Or Thomas May?

17 A I don't know whether I know Thomas May or
18 not.

19 Q Okay. If we could pull up as Plaintiffs'
20 Exhibit C, the Journal of National Academy of Forensic
21 Engineers.

22 MR. CURRAN: Bear with me. What's the
23 document name? I don't see that title.

24 MR. MORGAN: Oh, let me just give you it,
25 actually. It will be under -- it would say 127,

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1 Article Text --

2 MR. CURRAN: I got it.

3 MR. MORGAN: -- 2584.

4 MR. CURRAN: Yes, sir. Coming up.

5 Q (By Mr. Morgan) Okay. What is the
6 National Academy of Forensic Engineers?

7 A My understanding is it's a -- it's an
8 organization of forensic engineers.

9 Q Okay. Are any of your colleagues members
10 that you know of?

11 A Yes, I believe they are.

12 Q And the journal of national Academy for
13 forensic engineers, you understand is peer reviewed,
14 correct?

15 A That is my understanding.

16 Q But what does into mean to be peer
17 reviewed?

18 A It means that the -- when an article is
19 written by an engineer or scientist, and that article
20 is then reviewed by other -- his peers in the -- in
21 the industry to -- for their input, to ensure that the
22 methodology, the results from studies are
23 scientifically acceptable.

24 MR. MORGAN: Okay. If we could scroll down
25 to page 6 -- it's going to say 64 at the top. It's

1 page 3. If we keep going further down. If we do go
2 to the one further down and go to the bottom where we
3 see Figure 1, if can he could zoom in on figure 1,
4 please.

5 Q (By Mr. Morgan) This article is titled
6 state of the arc and then in quotes, mapping by David
7 Icove, Ph.D., listed by Ph.D., Mark Goodson, PE, and
8 Thomas May, JD.

9 I want to read to you the abstract of this.
10 And it was published in June of 2021. The abstract is
11 in NFPA 921, guide for fire and explosion
12 investigations considers the technique arc mapping to
13 be one of the methodologies used in isolating a fire's
14 origin and spread. Provided the technique is used
15 properly and understanding its limitation, it is a
16 tool for investigators. Synthesized here is the
17 latest peer reviewed research and discussions on the
18 implementations of increased use the ground and arc
19 fault circuit interrupters on arc mapping analysis.
20 Incorporated are case studies and evaluations of
21 recent legal decisions. The goal is to arm
22 investigators with what's needed to maximize the arc
23 mapping's efficacy and the best -- and best presented
24 use in results.

25 You have never read this article; have you?

1 A I don't believe so.

2 Q Okay. So Figure 1 lists what's been peer
3 reviewed as when arc mapping is useful and when arc
4 mapping is not useful.

5 In reviewing Figure 1, are there any
6 instances that you disagree personally what that?

7 A I could not offer an opinion on this, as I
8 don't have context for it. I haven't read the entire
9 paper.

10 Q Okay. But when we go through on that
11 usefulness, do you agree that arc mapping is useful in
12 incipient stage fires?

13 A It can be.

14 Q Okay. Do you agree that it's useful where
15 there's limited damage?

16 A That term would have to be defined further.

17 Q Okay. Can you think of other than the
18 house burning down in the Wadsworth case, what would
19 be more extensive internal damage?

20 MR. LaFLAMME: Object to form.

21 A There was -- there was certainly fire
22 damage throughout most of the structure. But as I --
23 as I stated here, when we say limited damage and
24 extensive damage, I would need further context on

25 that. I can't -- I can't offer an opinion based just
35

1 on this.

2 Q (By Mr. Morgan) Okay. All right. We'll
3 come back to this. We can take this down for now.

4 Do you agree that the investigators should
5 examine the electrical wiring and devices in rooms
6 adjacent to the area of suspected origin until they're
7 satisfied their analysis is sufficient to support
8 their finding?

9 A I think investigators should always
10 investigate whenever they believe is necessary to
11 satisfy themselves that their investigation is sea
12 periphery.

13 Q Well, satisfy themselves, but
14 scientifically be satisfactory as well, where you're
15 offering your opinions to the court or for a peer
16 reviewed study; is that fair?

17 A Absolutely.

18 MR. MORGAN: So when we go to -- if we
19 could pull up your report and go to the Conclusions
20 section, which was marked as Plaintiffs' Exhibit A.

21 Q (By Mr. Morgan) Okay. I wanted to
22 specifically look at Conclusion 2. Conclusion 2, you

23 said, There was no evidence of electrical arcing on
24 conductors located within the residence.

25 Would you like to amend that conclusion
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1 based off the investigation that you told us that you
2 have done?

3 A I would say that --

4 MR. LaFLAMME: Object to form.

5 Go ahead.

6 A -- there as no evidence of electrical
7 arcing on the conductors within the residence that
8 were part of the study for this matter.

9 Q (By Mr. Morgan) Would a fair statement be:
10 There was no evidence of electrical arcing on the
11 conductors located within the residence in Bedroom 4?

12 A I would agree with that statement.

13 Q Okay.

14 MR. MORGAN: Okay. We can take that down.

15 Q (By Mr. Morgan) Now, going back to the lab
16 and the way that you inspected for arcing: Who all
17 was inspecting the branch circuit for arcing?

18 A There were a number of -- there were a
19 number of people present at the lab. I don't recall
20 everyone's name at this moment. I was focused on --
21 on tracing -- on evaluating those conductors myself.

22 I know that others were involved. But I
23 was focused on evaluating the conductors.

24 Q Okay. Was anyone else involved in the
25 evaluation of the conductors, like you were?

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1 A I believe.

2 Q That you remember?

3 A I believe there was.

4 Q Would it have been I guess from the
5 Plaintiffs' side, or do you not know?

6 A I believe so, yes.

7 Q Okay. Anybody else -- Filas, is that
8 right?

9 A I'm sorry.

10 Q Is it Mr. Filas or Dr. Filas?

11 A Oh, yeah, yeah. Mr. Filas, yes.

12 Q Filas. The pronunciation just gets me
13 because it looks like Filas?

14 A No worries.

15 Q Is it Dr. Filas or Mr. Filas? I don't
16 remember.

17 A Mr.

18 Q Okay. Mr. Filas, was he also involved in
19 the actual touching examination, looking for the

20 arcing?

21 A He may have been. I don't recall.

22 Q Okay. So take me through -- let's just
23 focus on what you did there. Take me through your
24 process to evaluate the branch circuits that you had,
25 the extension cords that you had, everything that you
38

1 took with you, take me through the process of how you
2 evaluated for arcing.

3 A Certainly. So as I stated before, all of
4 the -- anytime we have bare conductors, we look -- we
5 visually examine those, look for any evidence of --
6 anyplace the copper could be melted or anyplace
7 there's any type of anomaly that's not what we would
8 normally find on a copper wire.

9 Also, while we're doing that, feeling along
10 the wires, along every inch of the wire, to feel for
11 any small nicks or bumps or craters in the wire that
12 would require further investigation.

13 Every time that you identify a location
14 where there's something going on with the wire, I take
15 a closer look at that. It could be -- it could be
16 visually. It could be micro- -- you know, with a
17 microscope.

18 In this case, I don't believe we had a

19 microscope at the scene. I simply used a macro
20 setting on my -- one of my cameras.

21 And then using the visual characteristics
22 of known -- known visual characteristics of electrical
23 arcing instances, determine whether each anomaly we
24 find on the wire is or is not consistent with
25 electrical arcing.
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1 Q Okay. That last part again. I apologize.

2 A Then --

3 Q How you again whether it is or not
4 consistent. Sorry.

5 A Sure. Comparing -- comparing the visual
6 characteristics of the anomaly found on the wire to
7 known visual characteristics of electrical arcing.

8 Q What are the known visual characteristics
9 of electrical arcing?

10 A Well, there are a number of them. Some of
11 them are that we have a clear demarcation between
12 melted and unmelted portions of the conductor.

13 Another is that we have -- we can have
14 undamaged -- completely undamaged wire -- portions of
15 the wire outside of the arc, such as drawing lines or
16 tool -- tool marks from manufacturing of the wire.

17 We'll have a -- an arc bead, as it's
18 called, would have a round, smooth appearance to it.
19 Those are just -- those are just some of the
20 characteristics.

21 Q Okay. And what are the other causes in a
22 fire that can cause a bead type shape on a wire?

23 A Well, as far as -- you as far as a bead
24 type shape for -- when we're talking about electrical
25 arcing, or arc mapping, a bead would be evidence of an

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1 electrical arcing instance.

2 We could have a melt globule, as they are
3 known, for conductors that are melted say by fire
4 attack.

5 Q And what is the difference between a
6 globule and a bead in visual presentation?

7 A Sure. When we look -- when we look at at
8 globule, it will have quite the opposite visual
9 characteristics that we could typically see with a
10 bead from electrical arcing.

11 We would see less localized damage and more
12 spread-out damage. We will not see a clear line of
13 demarcation between melted and unmelted conductor.

14 And there could be other effects.

15 Q Do you have any peer reviewed literature

16 that supports that?

17 A Yes. Both NFPA 921 and again, the ATF Fire
18 Research Laboratory Technical Bulletin No. 1.

19 Q When we talk about the NFPA 921, would that
20 be in both the '21 and '24 editions?

21 A Yes.

22 Q Do you know what chapter they moved the
23 discussions on arc mapping to in the '24 edition, or
24 are they the same?

25 A I couldn't say for certain, but I believe

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1 they're in 6.3 or thereabouts. I believe they're in
2 Chapter 6.

3 Q Okay. So walk me back through the tools
4 and methodology you used to physically touch the wire
5 in search of arcing.

6 A Well, the tool I used were my fingers to go
7 along and feel every inch of that exposed conductor
8 and feel for any type of -- any type of anomaly on the
9 wire, anything that's not smooth, that doesn't feel
10 like normal -- normal new copper wire would.

11 Q Did you use any objective tool that would
12 be able to be replicated by another party?

13 A So feeling along the wire is simply -- is

14 simply a way to find areas that would warrant further
15 investigation. Simply feeling something on a wire by
16 itself is not an indication that there's there was an
17 electrical arc.

18 Q Isn't it true, though, that your method of
19 feeling and determining where you should look based
20 off your personal feel, is completely subjective to
21 you?

22 A Certainly what I feel with my fingers is
23 subjective to me. However, that is -- that is common
24 practice in the industry amongst -- amongst experts.
25 Other -- often we will -- we will all feel the same

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1 wire to verify.

2 Q Isn't it true that common practice is
3 actually to use a -- to drag a cotton ball and trace
4 the wire so that it would leave fibers that we can see
5 objectively the places of imperfections?

6 A In the last ten years that I've been in
7 this industry, I've actually never seen anybody do
8 that.

9 Q Have you ever read personally any
10 instruction on methodology of how to trace wire for
11 arcing?

12 A I'm sure that I have at some point.

13 Q But you can't point the Court or us to any
14 of that specific documentation?

15 A Not at this time.

16 Q Other than what you believe is NFPA --
17 that's in NFPA 921 and ATF Bulletin 1, any other place
18 that can he could -- any other literature that you can
19 point to that would support that using your fingers is
20 the proper methodology for that trace?

21 A I don't know of a specific piece of
22 literature for that.

23 Q What causes circuit breakers to trip?

24 A Well, when we're talking about a circuit --
25 a typical circuit breaker in the residence, there
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1 could be -- there can be many things that cause a
2 circuit breaker to trip.

3 Typical circuit breaker in a residence is
4 what is known as a thermal magnetic circuit breaker.
5 So there are two modes that it is meant to trip in:
6 One is thermal, which is for detecting overloads over
7 a period of time; the other is magnetic, which is for
8 detecting short circuits, much higher current events
9 over a shorter period of time.

10 The circuit breakers, in addition to

11 tripping on thermal or magnetic from electrical
12 activity or just electrical current flowing through
13 them, they can also trip if they are -- the thermal
14 element will trip if the circuit breaker is exposed to
15 sufficiently high temperatures, such as in a fire.

16 If the fire is to reach near the circuit
17 breaker panel, it can cause the circuit breakers to
18 trip; and because they're a mechanical device, the
19 circuit breaker can also trip due to physical impact
20 or shock.

21 Q In the Wadsworth case specifically, would
22 you agree that the -- based off the lack of fire
23 damage in the basement, that it was unlikely that the
24 temperatures reached a level in the basement that
25 would cause the breakers to trip?

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1 A I can say for certain that --

2 MR. LaFLAMME: Object to form. Go ahead.

3 A I can say for certain in the case of the
4 Wadsworth residence that the temperatures did not
5 reach -- the temperatures at the circuit breaker panel
6 did not reach adequate temperature to trip those
7 circuit breakers, because none of the circuit breakers
8 were tripped.

9 Q (By Mr. Morgan) Okay. However, the

10 failure of a circuit breaker to trip during a fire
11 does not conclusively mean that the house was not
12 energized during the time of the fire; is that fair?

13 A That is correct.

14 MR. LaFLAMME: Mike, are you at an okay
15 point to take a quick break?

16 MR. MORGAN: Sure.

17 THE VIDEOGRAPHER: The time is 10:05. We
18 are off the record.

19 (Recess taken.)

20 THE VIDEOGRAPHER: The time is 10:14. We
21 are back on the record.

22 Q (By Mr. Morgan) Okay. Let's turn back to
23 the arc mapping process that is laid out in NFPA 921.

24 That's what you followed, correct?

25 A That is correct.

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1 Q And specifically, we've gone over the fact
2 that the arc mapping that was done for this case
3 was -- within the residence, was just Bedroom 4,
4 right?

5 A Correct.

6 Q The NFPA 921 on electricity and fire, the
7 process where this is described, talks about that you

8 need to systematically examine the circuits and wires
9 remains for localized damage to conductors or plug
10 blades.

11 Did you do that for Bedroom 4?

12 A Yes, we did.

13 Q It then says, That colored tape or a flag
14 is used to mark arc site locations.

15 Did you use any colored tape or flags to
16 mark the locations in the site?

17 A Very few of the actual locations of arcing
18 were identified at the site. But those were -- those
19 were marked and collected separately.

20 Q Did you attempt to search for arcing
21 locations at the site where the removing of the branch
22 circuit?

23 A No. It was determined that that would be
24 better conducted in the laboratory setting.

25 Q So there would be no pictures dictating or
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1 detailing rather where you thought potential for arc
2 site that's would need further investigation were at
3 the scene; fair?

4 A As I just stated, we determined that it
5 would be better to collect the circuits whole and look
6 for evidence of arcing in a more controlled setting.

7 Q You do realize that that departs from the
8 recommendations of NFPA 921 that you had cited in your
9 report in this deposition; true?

10 A I do not believe it does.

11 Q Okay. If it says that is specifically what
12 you should do, you do not agree that that is what NFPA
13 921 states, correct?

14 A I'm not disagreeing with what NFPA 921
15 states. I'm saying, it was determined by the
16 investigators, myself included, in this instance, that
17 it would be better to do that in a controlled
18 environment.

19 Q Well, there's no reason you cannot do both,
20 right?

21 A We believe this it would not be productive
22 to do it at the site. We documented where the
23 conductors ran through the site, and we collected them
24 so we could, again, investigate -- examine them in a
25 more controlled environment.

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1 Q I understand that in a laboratory, it is
2 more controlled. And NFPA actually provides for that,
3 right?

4 A Yes.

5 Q Ninety-two -- well, did I freeze or you
6 froze?

7 A I'm sorry. It froze up in the middle of
8 what were you saying.

9 Q Sorry. I think it was me.

10 I said, NFPA 921 actually provides for the
11 process after you do a site determination to collect
12 and review in the lab, if necessary, correct?

13 A Yes.

14 Q But you chose -- whoever "we" is chose to
15 not do the on-site documentation; fair?

16 A It was agreed upon by all of the
17 investigators at the site, representing all of the
18 parties involved, that it would not be productive to
19 attempt to do that at the site and that we could risk
20 damaging or destroying evidence if we -- if we did so.

21 Q Is it your position in this deposition that
22 there's a greater risk of destroying evidence by
23 visually inspecting for areas of arc and labeling it
24 with a flag or tape versus removing it from the scene?

25 MR. LaFLAMME: Object to form.

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1 Go ahead.

2 A I'm stating that it was not feasible to --
3 or productive to search along the length of the

4 conductors at the scene in the condition that the
5 building was in and it was more -- it was more
6 productive and we believed safer from the -- from the
7 perspective of preserving evidence to collect those
8 items whole rather than feel along them, clean them
9 up, visually examine them at the scene.

10 Q (By Mr. Morgan) Okay. Well, let's be very
11 clear: It was feasible, correct?

12 A I don't believe it would have been
13 productive.

14 Q But that's not my question. It was
15 feasible, correct?

16 A Could it have occurred?

17 MR. LaFLAMME: Object to form. Asked and
18 answered.

19 Go ahead.

20 Q (By Mr. Morgan) I asked -- he said before
21 it wasn't feasible. I'm asking specifically about
22 feasibility:

23 MR. LaFLAMME: Same objection.

24 Q (By Mr. Morgan) So -- okay. Was it
25 feasible?

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1 A Could it have been done, yes.

2 Q Okay. When you say we decided it would not
3 be productive, who is "we"?

4 A That would be myself and all of the other
5 investigators that were present at the site that were
6 participating -- participating in the investigation.

7 Q But fair to say you were the one on the
8 defendant's side responsible for determination of
9 whether or not arcing was present in Bedroom 4,
10 correct?

11 A That is correct.

12 Q And was it your recommendation to -- that
13 it would not be productive to mark potential sites of
14 arcing with tape or flags on the scene?

15 A It was any position that it was -- it was
16 better for the investigation as a whole to collect all
17 of the artifacts and look at them in a more controlled
18 environment.

19 Q Okay. Did you at least take pictures with
20 some level of magnification within Bedroom 4 of the
21 potential arc sites?

22 A As I stated, we didn't -- we didn't locate
23 potential arc sites in Bedroom 4. What I did document
24 with photography and in my notes was the location
25 where the branch circuit conductors ran in the

1 bedroom.

2 Q Okay. If we can pull up the report again,
3 Exhibit A, and go do the conclusions, please.

4 MR. CURRAN: Yes, sir. One moment.

5 It's up, sir.

6 MR. MORGAN: Okay.

7 Q (By Mr. Morgan) When we look at Conclusion
8 No. 4, the conclusion reads, The physical evidence
9 presented by the electrical system at the residence
10 was not consistent with a fire originating within the
11 residence.

12 When we talk about the physical evidence
13 presented by the electrical system, are you referring
14 to arcing?

15 A Yes, I'm referring to electrical arcing or
16 the lack therefore.

17 Q Okay. And is it a fair interpretation of
18 this statement that it is not saying conclusively the
19 fire did not originate in the residence. It is simply
20 saying there was no evidence of electrical arcing in
21 Bedroom 4?

22 A Part of what -- part of what Conclusion 4
23 is saying is that there's no evidence of electrical
24 arcing in Bedroom 4, but it goes further than that.

25 The arc mapping, as a whole, provides in

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1 this case an indication of the fire spread or how the
2 fire progressed through the course of the fire.

3 Q Okay. Explain.

4 A Sure. So with we look at the -- the
5 area -- potential areas of origin defined by the fire
6 investigators involved in this matter, so we looked
7 at the Bedroom 4 and we looked at area just outside of
8 Bedroom 4, where a polymer smoking shed was located.

9 If we look at the -- all of the conductors
10 that we looked at, we found no evidence of electrical
11 arcing in the branch circuit conductors in Bedroom 4,
12 we found evidence of electrical arcing on small
13 fragment wells of wires located in what was the
14 polymer shed, whether that was the ends of extension
15 cords or appliance cords plugs into that, we don't
16 know. They were simply fragments. But we have
17 evidence of electrical arcing in the shed.

18 And then we have the severed service
19 triplex provided electrical service to the residence
20 from the -- from the utility company.

21 And so we have -- we have arc -- once --
22 I'll start with the service triplex. The service
23 triplex was composed of aluminum, and it ran

24 approximately right over the polymer shed.

25 The service triplex was melted and severed

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1 during the fire, which is not uncommon. Again,
2 aluminum has a low enough melting temperature that it
3 is common for eliminate to melt if a fire.

4 Once that service triplex melted and was
5 severed, there would no longer be any electrical
6 service to the residence; there could no longer be any
7 electrical energy in any of the branch circuits in the
8 residence.

9 So having evidence of electrical arcing on
10 cords in the shed, we know that fire was present in
11 the shed or at the shed prior to the time that the
12 service triplex was severed; because again, after the
13 service triplex was severed, we would have no
14 electricity to produce arcing.

15 Then the --

16 Q Okay.

17 A -- the -- once that service triplex was
18 severed, there is no longer -- again, no longer any
19 electrical energy present in any of the branch
20 circuits, so there would be no -- there would be no
21 electrical arcing, there would be no evidence of
22 electrical arcing on any of the circuits after that.

23 Q Okay. We've already discussed that you are
24 not able to give us an opinion as to whether or not
25 there was electrical arcing on any conductors or
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1 circuits other than in Bedroom 4 within the residence;
2 true?

3 A Correct.

4 Q If that is true, then whether or not the
5 fire originated inside or outside of the house, that
6 can't be told simply by the electrical arcing on a
7 power cord or an appliance cord, correct?

8 A While I -- while I -- my scope was not to
9 look for or determine a specific area of origin.
10 Again, I used the arc mapping as a tool to show
11 evidence of fire spread.

12 So this can provide a timeline. I can --
13 from the physical evidence, we know that there was
14 fire at the shed before there was fire in the bedroom,
15 Bedroom 4.

16 Q Let's stop right there. How do we know
17 that?

18 A Sure. I'll go through it again.

19 Q No. I mean, here's where I'm having
20 trouble, right: We know that you did not arc map the

21 entire home, correct?

22 A That is correct.

23 Q So when you say that you believe that

24 because the triplex was melted and you didn't see

25 arcing in Bedroom 4, that means there was no

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1 electricity to the home, right? Is that right?

2 A I want to make sure I understand exactly
3 what you're stating there.

4 Yes, once the service triplex melted and
5 severed, there was no more electrical power to the
6 home.

7 Q Right. But what I'm saying is: Because
8 you only arc mapped two places, Bedroom 4 and the
9 shed, you cannot tell anyone that there was not
10 electricity in the home at the time that the service
11 triplex melted, because I don't have any evidence
12 yourself, right?

13 MR. LaFLAMME: Object to form.

14 A So if I understand what you just asked me,
15 you're saying -- you're saying that I cannot determine
16 that there was no electrical power in the home when
17 the service triplex melted. And that is incorrect.

18 Q (By Mr. Morgan) Correct.

19 A When the service triplex melted, there was

20 no longer any electrical energy in the home.

21 Q Okay. That part is true. But whether or
22 not Bedroom 4 was on fire before that, cannot be
23 stated, right?

24 A No, I don't believe -- I don't believe
25 that's true.

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1 Q Okay. Well, let's walk through it,
2 because -- was there electrical arcing in the kitchen?

3 A We do -- we do not have -- we do not have
4 evidence, as we just went through. We looked at
5 Bedroom 4 and we looked at the area outside of Bedroom
6 4, in the area -- in the area where the fire
7 investigators involved in this matter determined their
8 potential areas of origin to be.

9 Q I'm going to go through it, because you're
10 making big assumptions. And I want to go through
11 piece by piece for the Court to be able to determine
12 the validity of this methodology. So please just bear
13 with me on the piece-by-piece analysis.

14 At the time that the fire got to the
15 kitchen, is there any evidence that you have as to
16 whether or not there's electrical arcing on any of
17 those outlets?

18 A In the kitchen?

19 Q Yes.

20 A No.

21 Q Do you have any evidence as to whether
22 there is or is not arcing within the master bedroom of
23 the Wadsworth home at the time of the fire?

24 A I do not.

25 Q Do you have any evidence as to whether or

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1 not there is electrical arcing in the living room on
2 the Wadsworth home?

3 A I do not.

4 Q When we talk about electrical and power
5 cords and appliance cords, those are what are referred
6 to as stranded, correct, stranded cords?

7 A I'm sorry. You broke up a little there.
8 Did you say stranded cords?

9 Q Correct. Yes, sir.

10 A Yes.

11 Q Okay. And how are stranded cords different
12 from the branch circuits in Bedroom 4?

13 A The branch circuits in Bedroom 4, as with
14 typical construction, are conducted -- are constructed
15 with solid conductors, where it is -- each conductor
16 is one solid piece of copper.

17 The stranded conductors, each conductor is
18 composed of many smaller copper wires.

19 Q Okay. And what about the insulation
20 generally on stranded cords versus branch circuits
21 used in home construction?

22 A It depends entirely on the cord. The
23 insulation can be the same or it can be composed of a
24 different material.

25 Q Isn't it true that most power cords on
57

1 stranded wires are made up of a single layer of
2 insulation?

3 A Well, if we're talking about a power
4 cord -- well, it depends. There are some power cords
5 that contain a single layer of insulation.

6 There are other cords, such as extension
7 cords, specifically the extension cords in this
8 matter, where there is individual insulation around
9 each conductor and then there's an outer jacket that
10 is also insulation.

11 Q Where you found evidence of arcing within
12 the shed, which conductors did you find arcing on?

13 A We found arcing on fragments of conductors
14 that were located in the shed.

15 Q Okay. Explain.

16 A So these were short sections of wire that
17 were in the shed that were severed from whatever cord
18 that they were originally part of prior to the fire.

19 Q And what were they made of. What type of
20 metal were these fragments?

21 A They were copper.

22 Q So you're unable to tell us specifically
23 what they're from. Did you find often remnants that
24 could be connected to them or no?

25 A We did not -- we did not find section
58

1 that's we believed we could connect together with any
2 certainty.

3 MR. MORGAN: If we can pull up what is --
4 the document is called 2018 Fire Tech Arc Mapping.

5 MR. CURRAN: Yes, sir.

6 Q (By Mr. Morgan) Okay. This is an article
7 that was published in Fire Technology.

8 Are you familiar with Fire Technology?

9 A I am.

10 Q Is Fire Technology also a peer reviewed
11 journal?

12 A I believe that it is.

13 Q Do you subscribe to Fire Technology?

14 A I do not.

15 Q What publications do you subscribe to to
16 stay up-to-date on the latest in fire investigation?

17 A I do not currently subscribe to any
18 printed -- printed publications aside from Fire and
19 Arson Investigator Magazine. Most of -- most of the
20 information I get these days is now published online.

21 Q As are these. I mean, are you a member of
22 Fire Technology online?

23 A I am not.

24 Q What about the National Academy of Forensic
25 Investigators?

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1 A Do you mean the National -- I'm sorry.
2 Could you restate that.

3 Q Yeah. From the -- well, let me ask you
4 this: You get it most online. Which journals do you
5 subscribe to online dealing with fire investigation
6 and technology?

7 A I subscribe to fire an Arson Investigator
8 through the International Association of Arson
9 Investigators.

10 Q Any other ones?

11 A No specific subscriptions.

12 Q Oh. I thought there were more, because you
13 said you got that one on paper, but you got most of it
14 online. But there's no other online ones you get.

15 A I certainly get information online. I
16 don't have subscriptions per se.

17 Q For the peer reviewed -- most of the peer
18 reviewed articles have subscriptions, right?

19 A I don't know that I could answer whether
20 most peer reviewed articles have subscriptions or not.

21 Q Okay. Are there any that you're -- that
22 you don't need a subscription to that you regularly
23 receive and review?

24 A I don't know that I do offhand, no.

25 Q Okay. This is the title of this is arc
60

1 mapping and critical review. You've never read this
2 before, correct?

3 A I couldn't say if I've read this article or
4 not. I don't recall.

5 Q Okay. Well, this isn't one that you said
6 that you considered and discounted when talking about
7 the critiques of fire -- of arc mapping, right?

8 A I did not cite this article.

9 Q Okay. Are you familiar with Vytenis
10 Babrauskas?

11 A Yes, I am.

12 Q How are you familiar with him?

13 A He has authored a number of publications,
14 most -- most notably one entitled the ignition
15 handbook.

16 Q Okay. Do you consider him to be an
17 authority within the fire investigation world?

18 A I consider him to be a knowledgeable
19 individual.

20 Q Sure. If we can go -- well, first, let me
21 ask you this: If we go down to -- it's page 29 of 33.
22 It's 776 in the journal.

23 If we go -- if we look at these hypotheses,
24 he says, The following hypotheses are not supported by
25 science or reliable experimental data, that is, they

61 ↑

1 are myths.

2 And what I want to ask you is -- I'm going
3 to go through each one and ask if you have any peer
4 reviewed literature or based off your training,
5 knowledge, or experience or otherwise, believe that he
6 is wrong.

7 One: An abundance of arc beads at a given
8 locale means that fire originated in that area, while

9 I postie of arc beads indicates that it did not.

10 Do you believe that to be false?

11 A I do not.

12 Q Do you think that is true?

13 A I believe that is a true statement.

14 Q So even know Mr. Babrauskas says that is a
15 myth, you actually believe that is true?

16 A I think -- I think we're getting crossed up
17 here.

18 Q Okay. Let me be very clear.

19 A Yes.

20 Q What he's saying is these next three things
21 are not true, that it is -- people have assumed it
22 within science, but he does not believe these to be
23 true.

24 And one of the things that he does not
25 believe to be true is that an abundance of arc beads

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1 at a given locale means that fire originated in that
2 area, while a postie of arc beads indicates that it
3 did not.

4 He does not believe that is true. Do you
5 agree with him?

6 A I'll state my answer more clearly: I agree
7 with the author that that statement is not true.

8 Q Okay. Thank you. That was a weirdly
9 worded question. So I apologize.

10 Do you also agree that the following
11 statement is not true: When multiple arcs are present
12 on a circuit, the direction of arcing will necessarily
13 proceed upstream towards the power source?

14 A I also agree that that statement is not
15 true.

16 Q Okay. He goes on -- I don't think 3 is
17 applicable to us.

18 But he goes on, and he says, In fire
19 investigation reports, it is not acceptable for an
20 investor to report that a conclusion was based simply
21 on arc mapping.

22 Do you agree with that?

23 A If we're talking -- if we're talking about
24 the origin and cause of a fire as a whole, when we're
25 talking about in fire investigation reports, then,

63
▲

1 yes, I would agree that it is -- it would not be -- it
2 would not be ideal for an investigator to report
3 solely based on arc mapping.

4 Q Okay. He also says -- he goes on to say,
5 There are few circumstances where arc mapping may be

6 utilized in a scientifically reliable manner.

7 Do you agree with that?

8 A I certainly agree that there are
9 circumstances where arc mapping may be utilized in a
10 scientifically reliable manner.

11 Q And he says that in order to do that, a
12 fire investigator wishing to rely on arc mapping in a
13 fire investigation report must explicitly set forth a
14 valid governing hypothesis and demonstrate how the
15 analysis comports with that analysis.

16 Do you agree with that statement?

17 A I do.

18 Q Okay.

19 MR. MORGAN: We can take that down.

20 All right. If we can pull up what is
21 labeled -- the title of the document is arc mapping --
22 did I mark that last one as an exhibit, I'm sorry.

23 MR. CURRAN: Yes, sir.

24 MR. MORGAN: Okay. The next exhibit will
25 be the one entitled Arc Mapping Methodology of module

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↑

1 globulus.

2 MR. CURRAN: Yes, sir. This will be
3 Exhibit E.

4 Q (By Mr. Morgan) Okay. I'm showing you

5 what has been marked as Exhibit E. And this is
6 article from liquor Lincoln memorial university law
7 review.

8 Have you read this before?

9 A I have not.

10 Q And again, this is one by David Icove,
11 Ph.D., as well as Thomas May, Esquire.

12 It was published in fall of 2020, which is
13 before you performed or before you wrote your report,
14 correct?

15 A Yes, that is before I wrote my report.

16 MR. MORGAN: If we can go down -- let's
17 see. We're going to go down to page 18 of the PDF,
18 page 54 of the journal.

19 Q (By Mr. Morgan) When we look at the last
20 paragraph, in sentence two, it says, At present,
21 field-based arc mapping is besieged by limited
22 non-peer reviewed scientific literary support, two,
23 substantial research, and three, idiosyncratic visual
24 and tactile testing techniques. The addition of
25 ill-equipped non-metallurgic practitioners into the

65
↑

1 mix assureds a resulting consequence of tacked tenuous
2 inferences, along with unsupported and unreliable

3 speculation.

4 Do you agree with that statement?

5 A I would need more context on that
6 statement. I would need to read this article.

7 Q Okay. I'm not sure if I asked: But you
8 have not read this article today -- before today?

9 A I have not.

10 Q And this is not one of the articles that
11 you dismissed when you talked about the limited
12 criticisms of arc mapping before you created your
13 report; fair?

14 A I don't believe I dismissed any articles
15 specifically.

16 Q In the beginning of the deposition -- and
17 I'm paraphrasing. But we can always go back and find
18 it -- I asked if you had read or reviewed in a
19 literary review any articles relating to criticisms of
20 arc mapping.

21 And you had said there was not a specific
22 criticism that you can remember and that you did
23 not -- hold on one second. I'll start over.

24 In the beginning of the deposition, we
25 spoke about the fact that you did not do a specific

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1 literary review for this case.

2 But you did mention that you were aware of
3 certain reviews and studies which spoke about
4 criticisms regarding arc mapping, but you did not find
5 those studies to be credible.

6 Do you remember that line of thought?

7 A I remember something along that line, yes.

8 Q Okay. The ones that you did not think to
9 be credible -- I'm not saying that you find this
10 credible at this point.

11 But this isn't one that you would have seen
12 before?

13 A Fair enough. I understand your question.
14 I do not believe I have seen this paper before.

15 Q Okay.

16 MR. MORGAN: If we can go down to --

17 Q (By Mr. Morgan) Let me ask that you: Can
18 you explain the difference between causal arcs and
19 victim arcs?

20 A Can I explain the difference between them?

21 Q Yes.

22 A The -- well, a victim arc would be an arc
23 that results from fire attacking an energized circuit;
24 whether -- whereas a causal arc would be an arcing
25 event that ignites a fire.

1 If you're asking specifically about what
2 the differences are physically if we look at those two
3 arcs, there -- the arcs themselves would be no
4 different. We would have to look at a larger context.
5 We would have to look at all of other circumstances
6 surrounding that to determine if an arch may have may
7 be the result of fire attack or if it may be causal.

8 MR. MORGAN: Okay. If we go down to page
9 36 of 41.

10 Q (By Mr. Morgan) We're talking about this
11 paragraph. You can review it. But it's talking about
12 experimentation that's been done to validate arcing.

13 One of the things said in the second
14 sentence is: The experiments conducted to date are
15 not statistically based, involve dissimilar facts and
16 are subjective.

17 My question to you is: First off, what is
18 a statistically significant experiment? What does
19 that mean?

20 A A statistically specific experiment --

21 MR. LaFLAMME: Object to form.

22 Go ahead.

23 A A statistically significant study would
24 involve a sufficiently large sample size to show that

25 there actually is a correlation between two or more
68

1 variables.

2 Q (By Mr. Morgan) Okay. Are you aware of
3 any studies that have been done that do support --
4 that are statistically significant relating to arc
5 mapping?

6 A I don't -- I don't know that I have a
7 specific example for you.

8 Q Okay.

9 MR. MORGAN: All right. We can take that
10 down.

11 Q (By Mr. Morgan) Let's go back to your
12 conclusions. And we've talked about 2 and we talked
13 about 4. I want to talk about the No. 3.

14 MR. MORGAN: If we can pull that back up.

15 Q (By Mr. Morgan) Okay. No. 3 says -- we'll
16 take it in two parts -- The physical evidence
17 presented by the electrical system at the residence
18 was consistent with, A, fire being present at or
19 within the polymer smoking shed prior to the time that
20 the fire severed the overhead service triplex to the
21 residence.

22 So let's start just with that. The
23 evidence that that is based off is the arcing found on

24 the metal fragments within the shed, correct?

25 A Yes, on the conductor fragments in the

69

1 shed.

2 Q As well as the lack of arcing in Bedroom 4,

3 correct?

4 A Well, when we're speaking specifically

5 about Conclusion 3A, when I say fire being present at

6 or within the polymer showing shed prior to the time

7 that the fire severed the overhead service triplex to

8 the residence, I'm not -- I'm not making that

9 statement based on anything that was or was not found

10 in Bedroom 4.

11 I'm making that statement simply based on

12 the fact that the service triplex was severed and

13 after the fact that that service triplex was severed,

14 there was no longer any electrical energy supplied to

15 the residence.

16 Therefore, any electrical arcing that

17 occurred to those conductors in the shed, which was

18 plugged into extension cords, powered by the

19 residence, for there to be evidence of electrical

20 arcing in the shed, that had to have happened prior to

21 the time that the service triplex was severed.

22 Q Okay. I do -- I believe I understand. But
23 let me ask you a hypothetical: Hypothetically, if we
24 had a fire in Bedroom 4 coming out of the window, did
25 that also cause the aluminum to melt and disconnect
70

1 power from the home?

2 A Any fire present at the service triplex
3 could cause the aluminum to melt and sever the
4 service to the residence.

5 Q Okay. And so going specifically to A:
6 What we are basing the fact that the fire must have
7 come from the shed that we have the presence of arcing
8 on the wire fragments and we do not have the inference
9 of arcing in Bedroom 4?

10 A No. That's not what I'm stating in 3a.
11 What I'm stating --

12 Q Okay. I'm still lost.

13 A I'm sorry. Go ahead.

14 Q Go ahead. No, I'm just having trouble
15 figuring out who other elements are considered there,
16 so I want to -- I'm trying to understand it.

17 A Sure. Sure. Conclusion 3A is very simple:
18 There was evidence of arcing, electrical arcing, on
19 conductor fragments in the shed. That could only
20 occur if there was electrical energy present, if the

21 electrical service to the residence was still intact.

22 The service triplex to the residence, which
23 supplies all of the electrical power to the residence,
24 was severed during the fire. It was melted and
25 severed.

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1 After the time that that service triplex
2 was severed, there was no longer any electrical energy
3 in the building and there was no possibility of
4 electrical arcing on conductors powers by the
5 building.

6 So all I'm saying in Conclusion 3A is that
7 the arcing occurred on the conductors within the shed
8 prior to the time that the overhead service triplex
9 was severed.

10 Q How do you determine that there was not
11 fire inside the residence and fire in the shed at the
12 same time?

13 A Well, I'm not -- not talking about in --
14 are we still speaking specifically about conclusion
15 3A?

16 Q Yes. Because conclusion 3A specifically
17 says that at the time there was fire in the home,
18 there was no -- there was did he energize the home was

19 did he energize at this time, correct?

20 A So you're talking about 3B now?

21 Q No. I'm still talking about 3A.

22 A Okay.

23 Q Hold on. Let me read it again. Maybe --

24 oh, I see. You're just saying 3A is simply saying

25 that there was fire in the shed before it lost it,

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1 before the energy was cut off, regardless, right?

2 A Correct.

3 Q That's -- that's the totality of 3A: is

4 that there must have been energy in the shed when

5 there was fire in the shed; is that right?

6 A Correct.

7 Q Got with. It got it. Sorry. I was just

8 reading it together.

9 Okay. So then 3B says, The overhead

10 service triplex being severed by the fire prior to the

11 time that the fire attacked the branch circuit wiring

12 within Bedroom 4 of the residence.

13 And is that saying that because there was

14 no arcing within Bedroom 4, that you believe the power

15 must have been cut by that time?

16 A That is correct.

17 Q Got it. Now, are you aware of hypothesis

18 or research relating to arcing on non-energized lines?

19 A I'm not aware -- I'm not aware of any
20 arcing occurring on non-energized lines, because
21 electrical arcing requires that the lines be
22 energized.

23 Q Okay. And then let's go to Conclusion 1.

24 And I'm going to leave out a word just for future
25 motion in limine, but you can talk about whether you
73

1 should come back in later.

2 No. 1: Evidence of electrical arcing was
3 present on conductors located within the polymer shed
4 adjacent to the residence.

5 That conclusion is simply talking about the
6 arcing on the metal fragments that we've seen,
7 correct, or that we've spoken about?

8 A Yes. That is -- that is speaking about
9 evidence of electrical arcing on the conductor
10 fragments that were found within the shed.

11 MR. MORGAN: Okay. We can take that down.

12 Q (By Mr. Morgan) We have spoken a lot about
13 peer reviewed articles that have been published by
14 other people.

15 Have you yourself ever published or

16 attempted to publish any literature on arc mapping?

17 A I have not published any literature.

18 Q And if we can attach what should be labeled
19 as invoices as the next exhibit?

20 MR. CURRAN: Yes, sir.

21 MR. LaFLAMME: Sorry, Mike. What was the
22 next exhibit?

23 MR. MORGAN: We've put a consolidated group
24 of invoices together versus going through all of them.

25 MR. CURRAN: It's coming up.

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1 Q (By Mr. Morgan) Just in general, do you
2 know how much that you charge for the hour for
3 investigative work?

4 A My current rate for investigative work is
5 \$350 per hour.

6 Q And do you have different rates for
7 different jobs that you do within AEI?

8 A I do not.

9 Q So for deposition, for writing report,
10 scene investigation, travel, everything that would be
11 build at that 350 rate?

12 A Sorry. I misunderstood your previous
13 question. My standard rate is \$350 per hour
14 currently. And my testimony rate is \$525 per hour.

15 Q Okay. Are there any other hourly rate
16 changes for any other activities?

17 A No.

18 Q And on this -- when -- are you based in
19 Denver?

20 A I am.

21 Q So when you come to Wyoming, do you charge
22 from the time you leave your house to the time you get
23 home to your house?

24 A I charge -- I charge from the location of
25 my office or when I pass my office and back to my
75

1 office, not to my home.

2 Q So if you have to sleep in Wyoming, do you
3 charge while you're sleeping?

4 A Do I charge hourly while I'm sleeping?

5 Q Yes.

6 A No, I do not. When I -- when I -- when I
7 travel to a job out of town, I stop billing when I
8 reach my hotel.

9 Q Got it. Do you know approximately -- and
10 we can scroll through what would have been provided as
11 a list of hours that we have.

12 Each one looks to be separate. Do you know

13 if there's a master invoice with all of your hours on
14 it?

15 A I do not believe there would be.

16 Q This is your typical billing practice: is
17 as work comes due, you have that invoice, but you
18 don't keep a master?

19 A I couldn't -- I couldn't speak to what is
20 kept in our accounting system. That's not something
21 that I have involvement in normally.

22 Q Okay. Who is the head of the accounting at
23 AEI?

24 A I believe -- I believe Carol Chavez would
25 be what we call the head of accounting. She wears
76

1 many hats.

2 Q Okay. And do you know approximately how
3 many hours you've billed in this case to date?

4 A Not offhand. I would have to refer back to
5 these same invoices.

6 Q Okay. And on the quantities of hours, that
7 would be where we're able to find specifically how
8 much was done?

9 A Yes.

10 Q Okay. And do you have work still to be
11 completed in this case, other than testifying at

12 trial?

13 A I currently have no work planned on this
14 case other than testimony.

15 Q Okay. Did anyone else assist you on
16 this -- in this work?

17 A That's a very vague question, but on its
18 face, no.

19 Q You're right. That is a vague question. I
20 just meant technically, did you have any technical
21 assistance from a junior engineer or something of that
22 matter?

23 A No.

24 Q The Defendant Walmart, have you prior --
25 have you worked for Walmart previously?

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▲

1 A I don't believe I ever have.

2 Q Do you believe that you ever worked for
3 Jetson, the hoverboard manufacturer?

4 A I may have had one other case with them. I
5 don't recall if it was prior to or following this one,
6 as this was several years ago.

7 Q Did it involve a fire?

8 A I believe it did. And again, I believe
9 I've had one other case for them. I couldn't say that

10 for certain.

11 Q I understand. Do you remember the -- the
12 location that the case would have been pending?

13 A Not offhand.

14 Q Was Mr. LaFlamme the attorney on that case?

15 A I don't believe so.

16 Q Have you worked with Mr. LaFlamme or his
17 firm before?

18 A I have.

19 Q How many times?

20 A I would have to estimate I would say ten to
21 20 times perhaps.

22 Q Did all of those cases involve fires?

23 A I would say that -- I would say it is
24 likely that -- most of them involve fires or
25 explosions. There was at least one that did not.

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1 Q Okay. Other ones that involve fire or
2 explosions, approximately how many of those involved a
3 product?

4 Let me strike that. That's a bad question.

5 MR. LaFLAMME: I was going to object to
6 form. Go ahead, Mike.

7 Q (By Mr. Morgan) In the cases that involve
8 fire or explosion, approximately how many of those

9 alleged that a product was the cause of the fire or
10 explosion?

11 MR. LaFLAMME: Mike, are you just talking
12 about just if they were put on notice or if it went to
13 a case and there was an actual allegation? There's
14 two differences there.

15 MR. MORGAN: Good point.

16 Q (By Mr. Morgan) I'm talking about where
17 you were retained as an expert in a lawsuit, where a
18 lawsuit had been filed, and that lawsuit alleged that
19 a product caused an explosion or a fire.

20 A Are you asking specifically about matters
21 that I was retained by Mr. LaFlamme's firm or all
22 matters?

23 Q Mr. LaFlamme's firm.

24 A I would -- again, I'm estimating here. I
25 would say that likely most of them involved a product

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1 of some sort. Though, some would have involved a
2 service.

3 Q Okay. Of the ones that involved the an
4 allegation that the product caused the fire or
5 explosion, do you have any recollection of any case
6 where you agreed that the product was the cause of the

7 fire or explosion?

8 A Again, if you're asking specifically to
9 Mr. LaFlamme's firm, I couldn't say for sure. I'd
10 have to go back and look at my files.

11 However, I will say that it is a regular
12 occurrence for me to go back to a client and have to
13 tell them bad news. It all depends -- it all depends
14 on where the evidence leads.

15 Q In the other case involving the Jetson
16 hoverboard, did you give the client bad news in that
17 case?

18 A Again, I think there may have been one
19 other case, and I don't recall. I would have -- I
20 have would have to look that up to see if there even
21 was another case.

22 I know that I have worked on other cases
23 with other hoverboards before that were not Jetson.
24 So again -- I'm sorry -- I'd have to look that up.

25 Q And are you generally familiar with the

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1 allegations that hover- -- some hoverboards have of
2 lithium ion batteries that become unstable and have
3 thermal runaway events, causing fires?

4 A I am aware of those allegations.

5 Q Have you ever been involved in a case where

6 you were retained by a defendant by agreed that the
7 source of the fire was a lithium ion battery from a
8 hoverboard?

9 A A hoverboarded specifically, I do not believe
10 that I ever have.

11 Q Okay. Approximately what percentage of
12 your work, your personal work, is done on behalf of
13 defendants?

14 A I would estimate that it's approximately
15 90 percent.

16 Q Have you ever worked for my firm: Morgan &
17 Morgan?

18 A I don't believe I ever have.

19 Q Within your report, when we look at it in
20 total -- we can take down the invoices -- what
21 percentage of the actual first 26 pages were created
22 specifically for this case versus language that you
23 use in multiple cases or repeated?

24 A Aside from the -- the basic template
25 outlining different sections of the report, this was
81

1 entirely authored by me specifically for this matter.

2 Q Okay. Other than yourself, do you know --
3 well, first off, let me ask you: Are you an owner or

4 a shareholder in AEI?

5 A I am not.

6 Q You don't participate in equity of the firm
7 in any way?

8 A I do not.

9 Q Do you know if the firm AEI does work for
10 Walmart?

11 A I do not know offhand if they have ever
12 done work for Walmart.

13 Q Do you know offhand if any other people
14 within your firm or within AEI have done work for
15 Mr. LaFlamme's firm?

16 A Yes.

17 Q Do you know approximately how much income
18 Mr. LaFlamme's firm has paid AEI over the last five
19 years?

20 A I have no idea.

21 Q Have you and Mr. LaFlamme ever gone on
22 vacation together?

23 A We have not.

24 Q All right. Any outside work dealings with
25 Mr. LaFlamme or my members of his firm?

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1 A Aside from -- aside from perhaps getting
2 dinner after an inspection that we all traveled to,

3 no.

4 Q Sure. And that is not meant to be
5 critical. I'm just asking about your personal
6 relationships.

7 A Sure.

8 MR. MORGAN: I'll send it to Mr. LaFlamme

9 MR. LaFLAMME: Why don't we take a quick
10 break. And I don't know if I'm going to have any. I
11 just want to go through my notes quick and then we can
12 wrap it up.

13 MR. MORGAN: Sure.

14 THE VIDEOGRAPHER: The time is 11:17. We
15 are off the record.

16 (Recess taken.)

17 THE VIDEOGRAPHER: The time is 11:22. We
18 are back on the record.

19 EXAMINATION

20 BY MR. LaFLAMME:

21 Q Mr. Strandjord, just a couple of very quick
22 questions. You were shown by Mr. Morgan some small
23 portions of various articles that you referred to as
24 peer reviewed articles.

25 Do you recall that?

1 A I do.

2 Q Okay. Are you familiar with an -- you're
3 familiar with NFPA 921, correct?

4 A Yes, I am.

5 Q And I think you mentioned that there's a
6 2021 version and a 2024 version of NFPA 921?

7 A Yes. Those are the two most recent
8 editions.

9 Q Okay. How often generally does NFPA 921
10 update their editions?

11 A There's generally a new edition of NFPA 921
12 every three years.

13 Q Okay. And in that process of updating the
14 edition, do you know if NFPA 921 considers various
15 peer reviewed articles that are out there in the
16 marketplace concerning issues of fire investigation?

17 MR. MORGAN: Object to predicated
18 foundation.

19 A Yes. Certainly -- certainly, it does.
20 NFPA 921 is a consensus document that is authored
21 jointly by many individuals in the fire investigation
22 community.

23 Q (By Mr. LaFlamme) And when you say,
24 "consensus document," what do you mean by that?

25 A I mean the NFPA 921 is a guide, and it is

1 published by -- it is published by a committee within
2 NFPA. That -- that committee consists of a number of
3 individuals. I don't know how many offhand. But many
4 individuals who all must agree to one degree or
5 another on what is going to be published in that
6 guide.

7 Q And in NFPA 921, is that generally titled
8 The Guide for Fire and Explosion Investigation?

9 A Yes, I believe that's the title. It's
10 considered the standard in the industry as a guide.

11 Q Do you know if NFPA 921 is generally
12 accepted nationally as the guide for fire origin and
13 cause investigation?

14 A Yes, it most certainly is.

15 Q Does NFPA 921, both the 2021 version and
16 the 2024 version, do they allow for the use of
17 identifying electrical arcs, whether we call it arc
18 mapping or arc surveying, in the fire investigation
19 process?

20 A Yes, yes. They both include that as part
21 of the fire investigation process.

22 Q And do they allow the use of arc mapping
23 and arc surveying for the process of identifying or
24 assisting in the identification of fire spread?

25 A Yes. Arc -- arc mapping is considered a
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1 fire pattern in NFPA 921. And just like any other
2 fire pattern, it can be used as an aid in determining
3 spread or origin.

4 Q And can the identification of electrical
5 arcing also aid in the identification of or assist in
6 the identification of an area of origin under NFPA
7 921?

8 A I'm sorry. Your voice cut out there at the
9 end. I didn't hear the end of your question.

10 Q Sure. Can the identification of electrical
11 arc in through arc mapping and arc surveying under
12 NFPA 921 can that also aid in accessing an area of
13 origin for a fire?

14 A Yes. Just like any other fire pattern, it
15 can be used -- it can be used for origin
16 determination.

17 Q You discussed quickly before the lab
18 inspection, where there was electrical arcing that was
19 identified in some of the wiring found in the polymer
20 shed that was outside the house. And had indicated
21 that some other experts were there with you.

22 Was one of them a Scott Cramer from EDT?

23 Does that name ring a bell?

24 A That does ring a bell. Mr. Cramer may have
25 been present there, yes.

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1 Q Okay. Did you understand that Mr. Cramer
2 had -- was retained by Plaintiffs in this case at that
3 time?

4 A Yeah. If --

5 MR. MORGAN: Object to predicate.

6 A If indeed it was Mr. Cramer there, my
7 understanding was he was there on behalf of the
8 plaintiff.

9 Q (By Mr. LaFlamme) Okay. Do you recall at
10 least there being some expert consultants at the lab
11 inspection for the plaintiffs -- or on behalf of the
12 plaintiffs.

13 Is that accurate?

14 A Yes, I recall there being two individuals
15 there for the -- that identified themselves as being
16 there for the plaintiffs.

17 Q Okay. And do you know whether one of them
18 was Scott Cramer or not off the top of your head?

19 A I believe it may have been Scott Cramer.

20 Q Okay. And was the other expert an
21 individual named Smoky Dyer, D-y-e-r?

22 A Smoky Dyer, yes. That's a very unique
23 name. I believe that was smoky there.

24 Q Okay. And were those -- were the two
25 individuals that were there on behalf of the
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1 plaintiffs, were they also involved in identifying
2 potential areas of arcing on the electrical wiring
3 that were then investigated further?

4 A I believe they were. As I stated earlier,
5 my primary focus was on examining the wires for arcing
6 myself; but I believe the other individuals there were
7 involved in that as well.

8 Q But those individuals that were there for
9 the plaintiffs were also involved in that process.

10 Is that accurate?

11 A I believe that.

12 MR. MORGAN: Object to speculation.

13 Q (By Mr. LaFlamme) Was it your
14 understanding that the other individuals that were
15 there for or on behalf of the plaintiffs were also
16 involved in the process of identifying potential arc
17 locations?

18 A I believe they were certainly interested in
19 identifying any potential arcing.

20 MR. LaFLAMME: Okay. Sir, that's all the
21 questions I have for you. I don't know if Mr. Morgan
22 has some quick follow-up or not.

23 MR. MORGAN: Super quick.

24 One thing, just for the record, we've
25 agreed that the file produced in connection with Mr.
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1 Strandjord's deposition, his expert file of what
2 defendants have found relevant to collection from the
3 plaintiff, is authentic for purposes of use at trial
4 or otherwise.

5 Is that fair, Mr. LaFlamme?

6 MR. LaFLAMME: Yeah. And the only caveat,
7 Mike, with that is there are photographs in there from
8 other people.

9 So to the extent he may not be able to
10 authenticate that, but he can authenticate it that
11 it's part of his file.

12 MR. MORGAN: Yeah, that's fair. And I
13 understand. We all maintain our relevance objections
14 to all of that stuff.

15 EXAMINATION

16 BY MR. MORGAN:

17 Q But the only other thing that I forgot to
18 ask is: I saw your testifying list. There was about

19 five cases; is that right?

20 A I believe -- I believe the -- what was
21 supposed to be a four-year testimony history, I
22 believe it went back a little further than that on
23 that document. But there were more than five, I
24 believe.

25 Q Okay. How many times do you think you've
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1 testified in the last four years, for deposition or
2 trial, approximately?

3 A My -- my best answer to that would be that
4 that testimony record.

5 Q Okay. Okay. And I'll double-check it.
6 But I thought it was rather small.

7 How many cases do you think you worked on
8 in the last four years?

9 A How many total cases? I would -- I could
10 estimate it would be several hundred.

11 Q Okay. And have you -- has your testimony
12 ever been stricken under a prior or Daubert standard
13 for any reason or any portion?

14 A No, it has not.

15 MR. MORGAN: All right. That's all I have.
16 Thank you very much.

17 MR. LaFLAMME: And then we will read and
18 sign. Otherwise, I think we should be good.

19 THE VIDEOGRAPHER: Very good. This will
20 conclude the deposition of Brian Strandjord. The time
21 is 11:31.

22 (The following colloquy is not on the video
23 record.)

24 THE STENOGRAPHER: I just need to get
25 transcript orders on the record as well.

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1 MR. MORGAN: What I was going to say, we
2 need an expedited copy. I understand it's
3 Thanksgiving, but we've got to file this on Monday.

4 My request would be if we could use an
5 uncertified copy in the motion, that way we don't have
6 to expedite it, like, tomorrow. Otherwise, we would
7 need it tomorrow.

8 MR. LaFLAMME: Yeah. Mike, I think just
9 use a rough draft, and then supplement it when you get
10 it.

11 MR. MORGAN: Okay. Okay. Cool. As long
12 as we're in agreement, that's good.

13 THE STENOGRAPHER: E-tran and exhibits for
14 both counsel?

15 MR. MORGAN: Yes, please.

16 MR. LaFLAMME: Yes, please.

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